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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

April 27, 2006

SUBJECT: Draft Baseline Ecological Risk Assessment, Blows Creek Watershed; St. Juliens Creek Annex, Chesapeake, Virginia; February 2005

FROM: Bruce R. Pluta, Coordinator
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TO: Todd Richardson (3HS11)
NPL/BRAC Federal Facilities Branch

In response to your request, representatives of the BTAG have reviewed the subject report and offer the comments presented below. It should be noted that these comments pertain to the findings of the baseline risk assessment and do not address issues pertaining to the electronic deliverable format. These comments will be presented under separate cover.

1. The baseline ecological risk assessment for Blows Creek included performing benthic toxicity tests to evaluate impacts to benthic invertebrates and characterizing mercury concentrations in fish to evaluate risk to piscivorous birds. Significant benthic impacts were found at two locations, one (SD36) of which has been addressed via source control remedial activities at Site 4. The other location (SD11) does not have a strong correlation with co-located contaminants in sediment. Further investigation may be required in this area, perhaps associated with investigations for AOC 1 and AOC 8.
2. In Section 3.3, the Ingestion Screening Values for Belted Kingfisher table shows data for the mallard. It is not clear why mallard data is being used for the belted kingfisher. The Wildlife Factors Handbook indicates a breeding adult belted kingfisher has a mean weight ranging from 136 to 158 grams. This is significantly different than the mallard's weight of 1 kg. This will likely change the calculated LOAEL, MATC, and NOAEL values also.
3. Mercury concentrations in Blows Creek sediment remains elevated as a result of historical activity at the site. Although mercury was not found at concentrations of major concern in mummichogs, the characterization of bioaccumulation in the Creek has considerable uncertainty with the limited data that has been collected. Remedial activities at source locations have been performed and are on-going. In particular, BTAG recognizes that remedial activities (waste and soil removal) planned for Site 5 will address a significant source area to Blows Creek and will facilitate the natural attenuation of contaminants in the Creek, particularly if wetland areas are restored at the site as has been discussed in Site 5 remedial scoping meetings.

4. In Section 4.1, Risk Outcomes for Benthic Dwelling Organisms, there is a reference to the Sediment Bioassay Outcomes Figure. A review of this figure leads to a concern about the raw data for both the lab control, reference, and the pooled reference (if different than the reference). For example, for male mean growth there are eight Blows Creek samples that showed a significant effect when compared to the pooled reference data. However, this information is not shown on the figure, as only two sample locations are listed as being significantly reduced when compared to pooled reference or both lab control and pooled reference. Further explanation of the data presented in this figure/table is needed.
5. In Section 4.1, there is a reference to an EqP Comparison Figure. The figures relating to some of the chemicals do not appear correct. For example, Aroclor-1260 is listed with a range of hazard quotients from 179 to 1,337. However, the figure showing these Aroclor-1260 HQs only has the color for ND (assumed to be non-detect) and needs to have the color for $HQ > 25$ for all sample points. The other figures also need to be rechecked for accuracy.
6. Section 5.1 refers to a Correlations Coefficient Outcome Table. This table contains three columns with the headings > 0.8 , $0.5-0.79$, and ≤ 0.49 . Definitions of these column headings and any associated uncertainties need to be provided as footnotes. In addition, any uncertainties associated with the use of correlation coefficients need to be detailed in Section 7 of this report.

Thank you for the opportunity to review this document. Please contact me at x2380 or Simeon Hahn at x5419 if you have questions.